

Final Regulation adopted 12/21/2000

1 **BOARD FOR WATERWORKS AND WASTEWATER WORKS OPERATORS**

2
3 **REGULATIONS**

4
5 **PART I.**

6
7 **DEFINITIONS, LICENSING AND CLASSIFICATION REQUIREMENTS.**

8
9
10 ***18 VAC 160-20-10. Definitions.***

11
12 The following words and terms, when used in this chapter, shall have the following meaning unless
13 the context clearly indicates otherwise:

14
15 "Board" means the Board for Waterworks and Wastewater Works Operators.

16
17 "Category" means the two divisions of waterworks and wastewater works ~~and~~ operators' licenses,
18 one being waterworks and the second being wastewater works.

19
20 "Classification" means the divisions of each category of waterworks and wastewater works ~~and~~
21 operators' licenses into classes where Class "I" represents the highest classification.

22
23 "Contact hour" means 50 minutes of participation in a structured training activity.

24
25 "Continuing Professional Education (CPE)" means participation in a structured training activity that
26 enables a licensed waterworks operator to maintain and increase the competence required to assure the
27 public's protection.

28
29 "Department" means the Virginia Department of Professional and Occupational Regulation.

30
31 "Experience" means time spent learning how to physically and theoretically operate the waterworks
32 or wastewater works as an operator-in-training or time spent operating a waterworks or wastewater
33 works for which the operator is currently licensed.

34
35 "Licensed operator" means an operator with a license in the category and with a classification equal
36 to or higher than the classification of the waterworks or wastewater works being operated.

37
38 "Licensee" means an individual holding a valid license issued by the board.

39
40 "Licensure" means a method of regulation whereby the Commonwealth, through the issuance of a

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1 license, authorizes a person, possessing the character and minimum skills, to engage in the practice of a
2 profession or occupation which is unlawful to practice without a license.

3
4 "Operate" means any ~~the~~ act of an individual, which may impact on the finished water quality at a
5 waterworks or the plant effluent at a wastewater works.

6
7 "Operating staff" means individuals employed or appointed by an owner to work at a waterworks
8 or wastewater works.

9
10 "Operator" means any individual employed or appointed by any owner, and who is designated by
11 such owner to be the person in responsible charge, such as a supervisor, a shift operator, or a substitute
12 in charge, and whose duties include testing or evaluation to control waterworks or wastewater works
13 operations. Not included in this definition are superintendents or directors of public works, city
14 engineers, or other municipal or industrial officials whose duties do not include the actual operation or
15 direct supervision of waterworks or wastewater works.

16
17 "Operator-in-training" means an individual employed by an owner to work under the direct
18 supervision and direction of an operator holding a valid license in the proper category and classification
19 for the purpose of gaining experience and knowledge in the duties and responsibilities of an operator of
20 a waterworks or wastewater works. An operator-in-training is not an operator.

21
22 "Owner" means the Commonwealth of Virginia, or any political subdivision thereof, any public or
23 private institution, corporation, association, ~~firm or company~~ or any other entity organized or existing
24 under the laws of this Commonwealth or of any other state or nation, or any person or group of persons
25 acting individually or as a group, who own, manage, or maintain waterworks or wastewater works.

26
27 ~~"Person" means any individual, group of individuals, a corporation, a partnership, a business trust,~~
28 ~~an association or other similar legal entity engaged in operating waterworks or wastewater works.~~

29 [Remains in Code]

30
31 "Renewal" means continuing the effectiveness of a license for another period of time.

32
33 "Responsible charge" means the designation by the owner of any individual to have the duty and the
34 authority to operate ~~or modify the operation of~~ a waterworks or wastewater works.

35
36 "Structured training activity" means a formal educational process designed to permit a participant to
37 learn a given subject or subjects through interaction with an instructor in a course, seminar, conference
38 or other performance-oriented format.

39
40 "Wastewater works" means ~~each~~ a system of (i) sewerage systems or sewage treatment works

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1 serving more than 400 persons, as set forth in § 62.1-44.18 of the Code of Virginia; (ii) sewerage
2 systems or sewage treatment works serving fewer than 400 persons, as set forth in § 62.1-44.18 of the
3 Code of Virginia, if so certified by the State Water Control Board; and (iii) facilities for discharge ~~to~~ into
4 state waters of industrial wastes or other wastes, if certified by the State Water Control Board.

5
6 "Waterworks" means ~~each a system of that structures and appliances used in connection with the~~
7 ~~collection, storage, purification, and treatment of water~~ serves piped water for drinking or domestic use
8 to (i) at least 15 connections, or (ii) at least 25 of the same individuals for more than six months out of
9 the year. and the distribution thereof to the public, except distribution piping. Systems serving fewer than
10 400 persons shall not be considered to be a waterworks unless certified by the Department of Health to
11 be such. The term waterworks shall include all structures, equipment, and appurtenances used in the
12 storage, collection, purification, treatment and distribution of pure water, except the piping and fixtures
13 inside the building where such water is delivered.

14
15 **~~18 VAC 160-20-20. License required. (Repealed)~~**

16
17 ~~—To serve as an operator of a waterworks or wastewater works, it shall be necessary to hold a valid~~
18 ~~license issued by the board of a classification equal to or greater than the classification of the~~
19 ~~waterworks or wastewater works and in the appropriate category.~~

20 [Moved to 18 VAC 160-20-74]

21
22 **~~18 VAC 160-20-30. License renewal required. (Repealed)~~**

23
24 ~~—A. Licenses for waterworks operators shall expire on the last day of February of each~~
25 ~~odd numbered year. Licenses for wastewater works operators shall expire on the last day of February~~
26 ~~of each even numbered year. The Department of Professional and Occupational Regulation shall mail a~~
27 ~~renewal notice to the licensee outlining the procedures for renewal. Failure to receive this notice shall not~~
28 ~~relieve the licensee of the obligation to renew.~~

29
30 ~~B. Each licensee applying for renewal shall return the renewal notice and fee established in 18~~
31 ~~VAC 160-20-40 of this chapter to the Department of Professional and Occupational Regulation prior~~
32 ~~to the expiration date shown on the license. If the licensee fails to receive the renewal notice, a copy of~~
33 ~~the expired license may be submitted with the required fee.~~

34
35 ~~C. If the operator fails to renew the license within 30 days after the expiration date on the license, a~~
36 ~~penalty fee as established in 18 VAC 160-20-40 of this chapter shall be required, in addition to the~~
37 ~~renewal fee.~~

38
39 ~~D. Any operator failing to renew within one year of the expiration date on the license must apply~~
40 ~~for a new license by examination in accordance with Part II of this chapter. Such an individual shall be~~

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1 deemed to be eligible to sit for the same category and class of license as the expired license.

2
3 ~~E. Limited waterworks operator licenses, issued under the authority of § 4.02.2 of the Rules and~~
4 ~~Regulations of the State Board for Certification of Operators of Water and Wastewater Works~~
5 ~~(effective March 1, 1977), expiring on February 28, 1993, will not be renewed. Limited wastewater~~
6 ~~works operator licenses, issued under the authority of § 4.02.2 of the Rules and Regulations of the State~~
7 ~~Board for Certification of Operators of Water and Wastewater Works (effective March 1, 1977),~~
8 ~~expiring on February 28, 1994, will not be renewed. A holder of a limited license shall be deemed to~~
9 ~~have met the experience and education requirements of this chapter and shall be eligible to sit for an~~
10 ~~examination upon application in the same category and in the same or lower classification as the limited~~
11 ~~license currently held.~~

12
13 [Moved to 18 VAC 160-20-106]

14
15 **18 VAC 160-20-40. Fees. (Repealed)**

16 — Fees are nonrefundable and shall not be prorated.

17
18 — The following fees shall apply:

19
20 — 1. Application for licensure by examination or by reciprocity \$85.

21
22 2. Application for reexamination \$75.

23
24 — 3. Renewal of license \$45.

25
26 — 4. Penalty for failure to renew license within 30 days of expiration \$25.

27
28 [Moved to 18 VAC 160-20-102]

29
30 **18 VAC 160-20-50. Waterworks. (Repealed)**

31
32 — A. Class V shall mean any waterworks as follows:

33
34 — 1. ~~Waterworks employing no treatment other than chlorine disinfection, including consecutive water~~
35 ~~systems or groundwater systems with no treatment or consecutive systems employing repumping or~~
36 ~~rechlorination or both, and classified by the Department of Health as public water supplies; or~~

37
38 2. ~~Waterworks classified by the Department of Health as Class V waterworks.~~

39
40 — B. ~~Class IV shall mean any waterworks as follows:~~

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1
2 ~~— 1. Waterworks employing disinfection, corrosion control, iron and manganese removal, softening,~~
3 ~~slow sand filtration, rechlorination, and other approved methods of treatment, or any combination~~
4 ~~thereof, except fluoridation, serving less than 5,000 persons and classified by the Department of Health~~
5 ~~as public water supplies; or~~

6
7 ~~2. Waterworks classified by the Department of Health as Class IV waterworks.~~

8
9 ~~— C. Class III shall mean any waterworks as follows:~~

10
11 ~~— 1. Waterworks employing processes including, but not limited to, chemical coagulation,~~
12 ~~sedimentation, filtration other than slow sand filtration, disinfection, fluoridation, aeration, corrosion~~
13 ~~control, or any combination thereof, serving a population of less than 5,000, or having a rated capacity~~
14 ~~of less than 0.5 mgd; or~~

15
16 ~~— 2. Waterworks employing processes including disinfection, corrosion control, iron and manganese~~
17 ~~removal, softening, rechlorination, and other approved methods of treatment serving 5,000 persons or~~
18 ~~more; or~~

19
20 ~~— 3. Waterworks employing fluoridation which are not under a higher classification and which are~~
21 ~~classified by the Department of Health as public water supplies; or~~

22
23 ~~— 4. Waterworks classified by the Department of Health as Class III waterworks.~~

24
25 ~~— D. Class II shall mean any waterworks as follows:~~

26
27 ~~— 1. Waterworks employing processes including, but not limited to, chemical coagulation,~~
28 ~~sedimentation, filtration, disinfection, fluoridation, aeration, corrosion control, or any combination~~
29 ~~thereof, serving a population of at least 5,000 persons, but less than 50,000 persons, or having a rated~~
30 ~~capacity of at least 0.5 mgd, but less than 5.0 mgd; or~~

31
32 ~~— 2. Waterworks employing processes including, but not limited to, chemical coagulation,~~
33 ~~sedimentation, filtration, and disinfection, employing the high rate filtration process, and having a filter~~
34 ~~rate greater than 2.0 gpm/sq. ft., serving a population less than 50,000 persons, or having a rated~~
35 ~~capacity less than 5.0 mgd; or~~

36
37 ~~— 3. Waterworks classified by the Department of Health as Class II waterworks.~~

38
39 ~~— E. Class I shall mean any waterworks employing processes including, but not limited to, chemical~~
40 ~~coagulation, sedimentation, filtration, disinfection, fluoridation, aeration, corrosion control, or any~~

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1 ~~combination thereof, serving a population of 50,000 persons or more or having a rated capacity of 5.0~~
2 ~~mgd or more.~~

3
4 [Moved to 18 VAC 160-20-120]

5
6 ***18 VAC 160-20-60. ~~Wastewater works.~~(Repealed)***

7
8 ~~— A. Class IV shall mean any wastewater works as follows:~~

9
10 ~~— 1. Raw sewage stabilization ponds with a design hydraulic capacity greater than 0.04 mgd but~~
11 ~~equal to or less than 1.0 mgd; or~~

12
13 ~~— 2. Wastewater works classified by the State Water Control Board as Class IV wastewater works.~~

14
15 ~~— B. Class III shall mean any wastewater works as follows:~~

16
17 ~~— 1. Wastewater works using biological treatment methods having a design hydraulic capacity greater~~
18 ~~than 0.04 mgd, but equal to or less than 0.5 mgd; or~~

19
20 ~~— 2. Wastewater works using physical/chemical treatment methods having a design hydraulic capacity~~
21 ~~greater than 0.04 mgd, but equal to or less than 0.5 mgd; or~~

22
23 ~~— 3. Wastewater works using combinations of biological and physical/chemical treatment methods~~
24 ~~having a design hydraulic capacity greater than 0.04 mgd, but equal to or less than 0.1 mgd; or~~

25
26 ~~— 4. Raw sewage stabilization ponds, with a design hydraulic capacity greater than 1.0 mgd; or~~

27
28 ~~— 5. Wastewater works that do not use biological or physical/chemical treatment methods but are~~
29 ~~classified by the State Water Control Board as Class III wastewater works.~~

30
31 ~~C. Class II shall mean any wastewater works as follows:~~

32
33 ~~— 1. Wastewater works using biological treatment methods having a design hydraulic capacity greater~~
34 ~~than 0.5 mgd, but equal to or less than 5.0 mgd; or~~

35
36 ~~— 2. Wastewater works using physical/chemical treatment methods having a design hydraulic capacity~~
37 ~~greater than 0.5 mgd, but equal to or less than 5.0 mgd; or~~

38
39 ~~— 3. Wastewater works using combinations of biological and physical/chemical treatment methods,~~
40 ~~having a design hydraulic capacity greater than 0.1 mgd, but equal to or less than 2.5 mgd.~~

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~~D. Class I shall mean any wastewater works as follows:~~

~~1. Wastewater works using biological treatment methods having a design hydraulic capacity greater than 5.0 mgd; or~~

~~2. Wastewater works using physical/chemical treatment methods having a design hydraulic capacity greater than 5.0 mgd; or~~

~~3. Wastewater works using combinations of biological and physical/chemical treatment methods, having a design hydraulic capacity greater than 2.5 mgd.~~

~~E. Biological treatment methods as used in this section shall mean a fixed film or suspended growth biological treatment process, such as:~~

~~1. Activated sludge.~~

~~2. Trickling filter.~~

~~3. Aerated lagoon.~~

~~4. Rotating biological contactor.~~

~~5. Land application.~~

~~6. Biological nutrient removal process.~~

~~F. Physical/chemical treatment methods as used in this section shall mean a treatment process such as:~~

~~1. Chemical coagulation, flocculation and precipitation.~~

~~2. Filtration.~~

~~3. Carbon adsorption.~~

~~4. Breakpoint chlorination.~~

~~5. Demineralization (including but not limited to ion exchange, reverse osmosis, electro dialysis).~~

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1 [Moved to 18 VAC 160-20-130]

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PART II.

ENTRY LICENSE REQUIREMENTS.

18 VAC 160-20-70. ~~Licensure.~~(Repealed)

~~— The board shall issue a Class V, IV, III, II, or I license only after an individual has met all experience and examination requirements as set forth in this chapter. Each license shall be in the appropriate category and classification and shall indicate the highest classification of works the holder is qualified to operate.~~

18 VAC 160-20-74. License required.

To serve as an operator of a waterworks or wastewater works, it shall be necessary to hold a valid license issued by the board for a classification equal to or greater than the classification of the waterworks or wastewater works to be operated and in the appropriate category. Issuance of a new classification of license shall void all previously issued licenses in the same category. No licensee shall hold two licenses of different classifications in the same category. The board shall issue a license only after an individual has met all experience and examination requirements as set forth in these regulations.

18 VAC 160-20-76. Application

- A. Individuals desiring to be issued a license shall apply on forms supplied by the board. The application shall be completed according to the instructions provided with the application. Incomplete applications will be returned to the applicant. Fees shall remain valid for 90 days and shall not be refunded.
- B. Individual applicants shall be at least 18 years of age.
- C. The applicant shall disclose the following information about himself.
1. Any conviction by a court in any jurisdiction of any felony or of any misdemeanor involving lying, cheating or stealing, or of any [material] misrepresentation while engaged in waterworks or wastewater works activities. Any plea of nolo contendere shall be considered a conviction for purposes of this subsection. A certified copy of a final order, decree or case decision by a court or regulatory agency with the lawful authority to issue such order, decree or case decision shall be prima facie evidence of such conviction or discipline.

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1 2. Any disciplinary action taken by the board or another jurisdiction in connection with the
2 applicant's activities as a waterworks or wastewater works operator, including but not
3 limited to, monetary penalties, fines, suspension, revocation, or surrender of a license in
4 connection with a disciplinary action.

5
6 D. Each applicant shall disclose his physical address. A post office box shall not be accepted in
7 lieu of a physical address.

8
9 E. The fee established by 18 VAC 160-20-102 shall accompany the application and shall not
10 be refunded.

11
12 F. The receipt of an application and the deposit of fees in no way indicates approval of the
13 application by the board.

14
15 **18 VAC 160-20-80. Licensure by reciprocity. — Individuals certified or licensed in other**
16 **jurisdictions.**

17
18 ~~The board may issue a [license] to any person~~ Any applicant holding a currently valid license or
19 certificate in any state, territory, or possession of the United States, or in any foreign country, or a
20 certificate issued by the Association of Boards of Certification, provided the requirements and standards
21 under which the license or certificate was issued are equivalent to those established by this chapter in
22 another jurisdiction who meets the requirements of this chapter, including experience and education,
23 may take the examination in the Virginia category and classification comparable to the license or
24 certificate held in the other jurisdiction.

25
26 **18 VAC 160-20-85. Restricted License of Class VI Waterworks.**

27
28 A. The board shall issue a restricted license to operate a Class VI waterworks to the Class VI
29 waterworks owner or the Class VI waterworks owner's designee upon application for such
30 restricted license by the waterworks owner or his designee and provided said application is
31 received within two years after the effective date of this chapter. Waterworks owners or their
32 designees who fail to apply within the two year period must apply for a license pursuant to 18
33 VAC 160-20-90. A restricted license shall be limited to one license per Class VI
34 waterworks facility. The restricted license is site specific and non-transferable. The restricted
35 license expires three years from the date of issuance, and is not subject to renewal.

36
37 B. Each applicant for a restricted license to operate a Class VI waterworks shall apply on the
38 application form provided by the board which establishes that the applicant:

39
40 1. Is at least 18 years of age.

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- 1
- 2 2. Has the following education and experience:
- 3
- 4 a. A high school diploma or G.E.D. and six months experience, or
- 5
- 6 b. Has no high school diploma or G.E.D. and has 12 months experience.
- 7
- 8 3. Is the current operator of a specific Class VI system and does not hold a waterworks
- 9 license issued by the board; and
- 10
- 11 4. Understands that the restricted Class VI license that may be issued becomes invalid if he
- 12 leaves the facility for which the the license is sought or is issued a waterworks operator
- 13 license in any other Class.
- 14

15 **18 VAC 160-20-90. Licensure by experience and examination.**

16

17 Licensure is based upon having applicable experience and by demonstrating minimum required

18 knowledge, skills and abilities through an ~~by~~ examination. Education, ~~specialized~~ training, and

19 experience in the other category may be substituted for the required experience as specified in this

20 section. ~~These requirements are summarized in Table 1.~~

21

22 A. Experience. For purposes of this chapter, experience requirements are expressed in terms of

23 calendar periods of full-time employment ~~with actual hands-on experience~~ as an operator or as

24 an operator-in-training at a waterworks or wastewater works in the same category as the

25 license being applied for. All experience claimed on the application for licensure must be

26 certified by the individual's immediate supervisor.

27

28 1. A year of full-time employment is defined as a minimum of 1760 hours per year during a

29 twelve-month period or a minimum of 220 workdays per year in a twelve month period. A

30 workday is defined as attendance at a waterworks or wastewater works to the extent

31 required for proper operation. More than 1760 hours or 220 work days during a twelve

32 month period will not be considered as more than one year of full time employment.

33

34 2. Experience gained as an operator-in-training must be obtained under the supervision of an

35 operator holding a valid license of the same category and of a classification equal to or

36 higher than the classification of the waterworks or wastewater works at which the

37 experience is gained. The supervising operator shall certify the experience on the

38 application form as accurate and relevant to the classification and category of license for

39 which the application is being submitted.

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- 1 3. Partial credit may be given for actual hours of work or workdays experience if the applicant
 2 works as an operator or as an operator-in-training less than full time.
 3
 4 4. Experience solely limited to the operation and maintenance of wastewater collection systems
 5 and water distribution systems ~~operation and maintenance~~, laboratory work, plant
 6 maintenance, and other nonoperating duties shall not be counted as experience as an
 7 operator or as an operator-in-training.
 8
 9 5. Experience limited to water distribution system operation and maintenance shall be
 10 considered only when applying for a Class V or Class VI waterworks operator license.
 11
 12

Table 1. Summary of requirements for operator's license by class.

License Class	_____ + Education†	Current License	Total Experience Required (Years)	Experience must be at this class facility or higher (Years)				Maximum Substitution Permitted (Years)
				Cl.V	Cl.IV	Cl.III	Cl.II	
V	BS degree	None	0.5	0.5				0.0
	High School	None	0.5	0.5				0.0
	None	None	1.0	1.0				0.0
IV	BS degree	None	0.5		0.5			0.0
	High School	None	0.5		0.5			0.0
	None	None	1.0		1.0			0.0
III	BS degree	None	1.0		1.0			0.0
		IV	1.0		1.0			0.0
	High School	None	2.0		2.0			1.0
		IV	2.0		2.0			1.0
	None	IV	4.0		4.0			2.0
II	BS degree	None	1.5			0.5		0.0
		IV	1.5			0.5		0.0
		III	1.5			0.5		0.0
	High School	III	4.0			2.0		2.0

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	None	III	7-0			3-0		3-5
I	BS degree	II	2-5				1-0	0-0
	High School	II	6-0				2-0	3-0
	None	I	10-0		4-0	3-0	3-0	5-0

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~~{FN1} BS degree = bachelor's degree in engineering or engineering technology; or in physical, biological, or chemical science or engineering. All other bachelor's degrees will be considered the equivalent of high school education for the purpose of meeting the education requirement, although individual courses in science, engineering, or public health may be substitutes for experience in accordance with 18 VAC 160-20-90.~~

~~High School = high school diploma or GED or college degree other than BS degree defined above.~~

~~All experience must be at a waterworks or wastewater works of the appropriate category and of a class equal to or higher than the class equal to or higher than the class indicated in the table. Experience gained at a waterworks or wastewater works of higher class than currently held license must be direct supervision and direction of a properly licensed operator.~~

B. Specific requirements for licenses.

1. Specific requirements for a Class VI license. Applicants for licensure as a Class VI waterworks operator shall meet one of the following requirements and pass a board-approved examination:

a. Have (i) a high school diploma or GED and (ii) at least six months of experience as an operator-in-training in a Class VI, Class V, Class IV, Class III, Class II, or Class I waterworks; or

b. Have (i) no high school diploma and (ii) at least one year of experience as an operator-in-training in a Class VI, Class V, Class IV, Class III, Class II, or Class I waterworks.

2. Specific requirements for a Class V license. Applicants for licensure as a Class V waterworks operator shall meet one of the following requirements and pass a

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- 1 board-approved examination:
2
3 a. Have (i) a high school diploma or GED and (ii) at least six months of experience as an
4 operator-in-training ~~of waterworks of in~~ a Class V, Class IV, Class III, Class II, or
5 Class I waterworks; or
6
7 b. Have (i) no high school diploma and (ii) at least one year of experience as an
8 operator-in-training ~~of in waterworks of a~~ Class V, Class IV, Class III, Class II, or
9 Class I waterworks.
10
11 3. Specific requirements for a Class IV license. Applicants for licensure as either a Class IV
12 waterworks or wastewater works operator shall meet one of the following requirements and
13 pass a board-approved examination:
14
15 a. Have (i) a high school diploma or GED and (ii) at least six months of experience as an
16 operator-in-training ~~of in waterworks or wastewater works of a~~ Class IV, Class III,
17 Class II, or Class I waterworks or wastewater works (as appropriate); or
18
19 b. Have (i) no high school diploma and (ii) at least one year of experience as an
20 operator-in-training ~~of in waterworks or wastewater works of a~~ Class IV, Class III,
21 Class II, or Class I waterworks or wastewater works (as appropriate).
22
23 4. Specific requirements for a Class III license. Applicants for licensure as either a Class III
24 waterworks or wastewater works operator shall meet one of the following requirements and
25 pass a board-approved examination:
26
27 a. Have (i) a bachelor's degree in engineering or engineering technology, or in physical,
28 biological or chemical science; and (ii) at least one year of experience as an
29 operator-in-training ~~of in waterworks or wastewater works of a~~ Class IV, Class III,
30 Class II, or Class I waterworks or wastewater works (as appropriate); or
31
32 b. Have (i) a bachelor's degree in engineering or engineering technology, or in physical,
33 biological or chemical science; (ii) a Class IV license; and (iii) a total of at least one year
34 of experience as an operator or operator-in-training ~~in of waterworks or wastewater~~
35 ~~works of a~~ Class IV waterworks or wastewater works (as appropriate) or as an
36 operator-in-training ~~of in waterworks or wastewater works of a~~ Class III, Class II, or
37 Class I waterworks or wastewater works (as appropriate); or
38
39 c. Have (i) a high school diploma or GED and (ii) at least two years of experience as an
40 operator-in-training ~~of in waterworks or wastewater works of a~~ Class IV, Class III,

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1 Class II, or Class I waterworks or wastewater works (as appropriate); or

2
3 d. Have (i) a high school diploma or GED, (ii) a Class IV license, and (iii) a total of at least
4 two years of experience as an operator or operator-in-training ~~of in waterworks or~~
5 ~~wastewater works of a~~ Class IV waterworks or wastewater works (as appropriate) or
6 as an operator-in-training ~~of in waterworks or wastewater works of a~~ Class III, Class
7 II, or Class I waterworks or wastewater works (as appropriate); or

8
9 e. Have (i) no high school diploma, (ii) a Class IV license, and (iii) a total of at least four
10 years of experience as an operator or operator-in-training ~~in of waterworks or~~
11 ~~wastewater works of a~~ Class IV waterworks or wastewater works (as appropriate) or
12 as an operator-in-training ~~of in waterworks or wastewater works of a~~ Class III, Class
13 II, or Class I waterworks or wastewater works (as appropriate).

14
15 5. Specific requirements for a Class II license. Applicants for licensure as either a Class II
16 waterworks or wastewater works operator shall meet one of the following requirements and
17 pass a board-approved examination:

18
19 a. Have (i) a bachelor's degree in engineering or engineering technology, or in physical,
20 biological or chemical science; and (ii) a total of at least 1 1/2 years of experience, of
21 which at least six months without substitutions shall be as an operator-in-training ~~of in~~
22 ~~waterworks or wastewater works works of a~~ Class III, Class II or Class I waterworks
23 or wastewater works (as appropriate); or

24
25 b. Have (i) a bachelor's degree in engineering or engineering technology, or in physical,
26 biological or chemical science; (ii) a Class IV license; and (iii) a total of at least 1 1/2
27 years of experience, of which at least six months without substitutions shall be as an
28 operator-in-training ~~of in waterworks or wastewater works of a~~ Class III, Class II or
29 Class I waterworks or wastewater works (as appropriate); or

30
31 c. Have (i) a bachelor's degree in engineering or engineering technology, or in physical,
32 biological or chemical science; (ii) a Class III license; and (iii) a total of at least 1 1/2
33 years of experience, of which at least six months, without substitutions shall be as an
34 operator or operator-in-training ~~of in waterworks or wastewater works of a~~ Class III
35 waterworks or wastewater works (as appropriate) or as an operator-in-training ~~of in~~
36 ~~waterworks or wastewater works of a~~ Class II or Class I waterworks or wastewater
37 works (as appropriate); or

38
39 d. Have (i) a high school diploma or GED, (ii) a Class III license, and (iii) a total of at least
40 four years of experience of which at least two years without substitutions shall be as an

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1 operator or operator-in-training of ~~in waterworks or wastewater works of a~~ Class III
2 waterworks or wastewater works (as appropriate) or as an operator-in-training of ~~in~~
3 ~~waterworks or wastewater works of a~~ Class II or Class I waterworks or wastewater
4 works (as appropriate); or

- 5
6 e. Have (i) no high school diploma, (ii) a Class III license, and (iii) a total of at least seven
7 years of experience of which at least three years without substitutions shall be as an
8 operator or operator-in-training of ~~in waterworks or wastewater works of a~~ Class III
9 waterworks or wastewater works (as appropriate) or as an operator-in-training of ~~in~~
10 ~~waterworks or wastewater works of a~~ Class II or Class I waterworks or wastewater
11 works (as appropriate).

- 12
13 6. Specific requirements for a Class I license. Applicants for licensure as either a Class I
14 waterworks or wastewater works operator shall meet one of the following requirements and
15 pass a board-approved examination:

- 16
17 a. Have (i) a bachelor's degree in engineering or engineering technology, or in physical,
18 biological or chemical science; (ii) a Class II license; and (iii) a total of at least 2 1/2
19 years of experience, of which at least one year without substitutions shall be as an
20 operator or operator-in-training of ~~in waterworks or wastewater works of a~~ Class II
21 waterworks or wastewater works (as appropriate) or as an operator-in-training of ~~in~~
22 ~~waterworks or wastewater works of a~~ Class I waterworks or wastewater works (as
23 appropriate); or

- 24
25 b. Have (i) a high school diploma or GED, (ii) a Class II license and (iii) a total of at least
26 six years of experience of which at least two years without substitutions shall be as an
27 operator or operator-in-training of ~~in waterworks or wastewater works of a~~ Class II
28 waterworks or wastewater works (as appropriate) or as an operator-in-training of ~~in~~
29 ~~waterworks or wastewater works of a~~ Class I waterworks or wastewater works (as
30 appropriate); or

- 31
32 c. Have (i) no high school diploma, (ii) a Class II license, and (iii) a total of at least 10
33 years of experience of which at least three years without substitutions shall be as an
34 operator or operator-in-training of ~~in waterworks or wastewater works of a~~ Class II
35 waterworks or wastewater works (as appropriate) or as an operator-in-training of ~~in~~
36 ~~waterworks or wastewater works of a~~ Class I waterworks or wastewater works (as
37 appropriate).

38
39 C. Substitutions for required experience.
40

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1 For the purpose of meeting the experience requirements for ~~licenses of Class III, Class II, and~~
2 ~~Class I licenses~~, experience in the other category, relevant training in waterworks and
3 wastewater works operation, and formal education may be substituted for actual hands-on
4 experience in the category being applied for.

5
6 ~~1. Limitations on substitution.~~

7
8 ~~Substitutions may not reduce the actual operator experience required to less than 2 1/2 years~~
9 ~~for a Class I license, to less than 1 1/2 years for a Class II license, to less than one year for a Class~~
10 ~~III license, or to less than 1/2 year for a Class IV or Class V license.~~ ~~b a.~~ Under no
11 circumstances shall category experience, training, and education substitutions exceed 50% of the
12 total experience required in the appropriate subdivision of 18 VAC 160 20 90.

13
14 ~~c.b.~~ No category experience, training, or education substitutions are permitted for the
15 experience required to obtain a Class VI, Class V or a Class IV license as specified in 18 VAC
16 160 20 90 B.

17
18 ~~2. Category experience substitution. One half of the actual experience gained in the other category~~
19 ~~may be substituted for required experience in the category of the license being applied for.~~

20
21 ~~3. Education substitution. Education may be substituted for part of the required experience, subject~~
22 ~~to the limitations in 18 VAC 160 20 100 A as follows:~~

23
24 ~~a. Education used to meet the educational requirements for any class of license may not be~~
25 ~~substituted for experience.~~

26
27 ~~b. Formal education. Formal education courses at a post secondary level in physical, biological~~
28 ~~or chemical science; engineering or engineering technology; waterworks or wastewater works~~
29 ~~operation; or public health may be substituted for part of the required experience.~~

30
31 ~~(1) All education substituted for experience must be relevant to the category and classification of~~
32 ~~the license being applied for.~~

33
34 ~~Education may be substituted for experience at a rate of one month experience for each semester hour~~
35 ~~of college credit approved by the board. One quarter hour of college credit will be considered equal to~~
36 ~~2/3 of a semester hour.~~

37
38 ~~c. Specialized training. Waterworks or wastewater works operator training courses, seminars,~~
39 ~~workshops, or similar specialized training, specifically approved by the board, may be substituted for~~
40 ~~part of the required experience.~~

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1
2 ~~—— (1) All training substituted for experience must be relevant to the category and classification of the~~
3 ~~license being applied for.~~

4
5 ~~—— (2) Training may be substituted for experience at a rate of one month experience for each training~~
6 ~~credit (TC) approved by the board. One TC is awarded for each 10 hours of classroom contact time or~~
7 ~~for each 20 hours of laboratory exercise and field trip time. No credit towards TCs is granted for~~
8 ~~breaks, meals, receptions, and time other than classroom, laboratory and field trip contact time.~~

9
10 ~~—— (3) All courses used for substitution must be approved by the board utilizing the criteria set forth~~
11 ~~in Appendix A.~~

12
13 1. Category experience substitution. One-half of the actual experience gained in the other
14 category may be substituted for required experience in the category of the license being
15 applied for.

16
17 2. Education substitution. Education may be substituted for part of the required experience in
18 the category of the license being applied for, subject to the following limitations:

19
20 a. Education used to meet the educational requirements for any class of license may not be
21 substituted for experience.

22
23 b. Formal education courses at a post-secondary level in physical, biological or chemical
24 science; engineering or engineering technology; waterworks or wastewater works
25 operation; or public health may be substituted for part of the required experience.

26
27 (1) All education substituted for experience must be relevant to the category and
28 classification of the license being applied for.

29
30 (2) Education may be substituted for experience at a rate of up to one month
31 experience for each semester hour of college credit approved by the board. One
32 quarter hour of college credit will be considered equal to 2/3 of a semester hour.

33
34 (3) Substitution of formal education experience will be approved by the board only for
35 applicants who submit a transcript from the institution at which the course was
36 taken.

37
38 c. Training. Waterworks or wastewater works operator training courses, seminars,
39 workshops, or similar training, specifically approved by the board, may be substituted
40 for part of the required experience.

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1
2 (1) All training substituted for experience must be relevant to the category and
3 classification of the license being applied for.

4
5 (2) Training may be substituted for experience at a rate of one month experience for
6 each training credit (TC) approved by the board. Up to one TC is awarded for
7 each 10 hours of classroom contact time or for each 20 hours of laboratory
8 exercise and field trip contact time. No credit towards TCs is granted for breaks,
9 meals, receptions, and time other than classroom, laboratory and field trip contact
10 time.

11
12 (3) All courses used for substitution must be approved by utilizing the criteria set forth in
13 Part VI of this chapter.

14
15 (4) Substitution of training for experience will be approved by the board only for
16 applicants who submit a copy of an appropriate certificate identifying the subject
17 matter of the course and the TC value, and signed by a representative of the
18 organization sponsoring the training.

19
20 3. Limitations on substitution.

21
22 a. Under no circumstances shall category experience, education, and training substitutions
23 exceed 50% of the total experience required under the appropriate sections of 18 VAC
24 160-20-90.

25
26 b. No category experience, education, or training substitutions are permitted for the
27 experience required to obtain a Class VI, Class V or a Class IV license as specified in
28 18 VAC 160-20-90 B.

29
30 D. Examination.

31
32 A board-approved examination shall be administered at least twice a year.

33
34 1. An individual may take the examination prior to fulfilling the education and experience
35 requirements, provided all requirements will be met within three months after the date the
36 applicant will take the examination. ~~The results of the examination and the license shall not~~
37 be issued until all applicable requirements have been met and satisfactorily verified.

38
39 2. An individual who is unable to take an examination at the time scheduled shall notify the
40 board prior to the date of the examination; such an individual shall be rescheduled for the

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1 next examination. Failure to notify the board may require the submittal of a new application
2 and payment of fees, ~~in accordance with § 1.4 and § 2.4 A.~~

- 3
- 4 3. Upon submission of an application for reexamination form provided by the board and
5 payment of the reexamination fee, an applicant who is unsuccessful in passing an
6 examination will be allowed to retake ~~any examination(s) given the examination up to two~~
7 times within two years of the date of notification of initial unsuccessful examination results.
8 ~~After the two-year period has elapsed~~ If the two-year period elapses, or if an applicant fails
9 to pass both re-examinations, an then the applicant will be required to submit a new
10 application with fee in accordance with ~~these regulations~~ this chapter in order to take an
11 examination. ~~Applications for reexamination must be received in the Department of~~
12 ~~Commerce at least 60 days prior to a scheduled examination in order to be eligible to sit for~~
13 ~~that examination.~~

- 14
- 15 4. Applications for examination and reexamination must be received by the Department of
16 Professional and Occupational Regulation at least 60 days prior to a scheduled examination
17 in order to be eligible to sit for that examination.

18

19 **~~18 VAC 160-20-100. Application. (Repealed)~~**

20

21 ~~— A. Any person seeking licensure by reciprocity or by education, experience, and examination shall~~
22 ~~submit a fully completed application with the appropriate fee(s) attached. Incomplete applications will~~
23 ~~be returned to the applicant. Application for licensure by examination must be received in the~~
24 ~~Department of Professional and Occupational Regulation 60 days prior to a scheduled examination in~~
25 ~~order to be eligible to sit for that examination.~~

26

27 ~~— B. All applications of candidates will be reviewed by the Department of Professional and~~
28 ~~Occupational Regulation staff to determine eligibility for licensure and examination within 50 days of~~
29 ~~receipt at the offices of the Department of Professional and Occupational Regulation. Any applicant may~~
30 ~~appeal the initial review, in writing, to the board within 60 days of the staff's determination. No applicant~~
31 ~~will be approved for licensure unless he meets all of the requirements of Part II of this chapter.~~

32

33 ~~— C. Applicants who have been found ineligible to sit for an examination may request further~~
34 ~~consideration by submitting a letter to the board with the necessary evidence of additional qualifications,~~
35 ~~training, or experience. No additional fee will be required, provided all requirements for licensing are~~
36 ~~met within two years from the date of original application.~~

37

38 [Moved to 18 VAC 160-20-76]

39

40 **18 VAC 160-20-102. Fees**

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- 1
2 A. All fees are nonrefundable.
3
4 B. The date of receipt of the fee by the board is the date which shall be used to determine whether
5 the fee is timely received.
6
7 C. The following fees shall apply:
8
9

<u>Application Fee</u>	<u>\$85</u>
<u>Renewal Fee</u>	<u>\$45</u>
<u>Late Renewal Fee, [Additional]</u>	<u>\$25</u>
<u>Re-examination Fee</u>	<u>\$75</u>
<u>Bad Check or Other Instrument Penalty</u>	<u>\$25</u>

10
11
12
13
14
15 D. A fee of \$25 will be charged, in addition to the fees established in this section, for submitting a
16 check to the board which is dishonored by the institution upon which it is drawn.
17

18 **18 VAC 160-20-104. Maintenance of License.**
19

- 20 1. ~~[Notice in writing shall be given to the board in the event of any change of the licensee's name or~~
21 ~~address. Such notice shall be received by the board within 30 days of the change of the name~~
22 ~~or address. The licensee shall notify the board in writing within 30 days of any change of name or~~
23 ~~address].~~
24
25 2. All licensees shall operate under the name in which the license is issued.
26
27

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1 **PART III.**

2
3 **RENEWAL.**

4
5
6 **18 VAC 160-20-106. Renewal.**

- 7
- 8 A. Licenses for waterworks operators shall expire on the last day of February of each odd-
9 numbered year. Licenses for wastewater works operators shall expire on the last day of
10 February of each even-numbered year.
- 11
- 12 B. The Department of Professional and Occupational Regulation shall mail a renewal notice to the
13 licensee outlining the procedures for renewal. Renewal notices shall be mailed to the licensee at
14 the last known address of record. Failure to receive written notice shall not relieve the licensee
15 of the obligation to renew and pay the required fee outlined in 18 VAC 160-20-102.
- 16
- 17 C. Each licensee applying for renewal shall return the renewal notice, fee, and, in the case of
18 waterworks licensees only, a statement that the applicant for license renewal has met the CPE
19 requirement established in 18 VAC 160-20-109 of this chapter prior to the expiration date
20 shown on the license. If the licensee fails to receive the renewal notice, a copy of the expired
21 license may be submitted in place of the renewal notice along with the required fee and, in the
22 case of waterworks licensees only, a statement that the [licensee has met] CPE requirement in
23 18 VAC 160-20-109 of this chapter [~~has been met~~].
- 24
- 25 D. The date on which the renewal fee and any required forms are actually received by the board or
26 its agent shall determine whether an additional fee is due.
- 27
- 28 E. If the requirements of subsection C of this section are met more than 30 days but less than 12
29 months after the expiration date on the license, a late penalty fee shall be required as established
30 in 18 VAC 160-20-102. The date on which the renewal application, any required
31 documentation and the required fees are actually received by the board or its agent shall
32 determine whether the licensee is eligible for renewal and whether an additional fee is due.
- 33
- 34 F. Any individual who fails to renew his license within 12 months after the expiration date printed
35 on the license shall apply for a new license by examination in accordance with Part II of this
36 chapter. Such individual shall be deemed to be eligible to sit for the examination for the same
37 category and class of license as the expired license.
- 38
- 39 G. The board may deny renewal of a license for the same reasons as it may refuse initial licensure
40 or discipline a licensee.

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1
2 **18 VAC 160-20-109. Waterworks operator continuing profession education (CPE).**
3

4 A. Effective with the February 2003 license renewal cycle, each licensed waterworks operator
5 shall have completed the following number of CPE contact hours required for his class of
6 license:

- 7
- 8 1. Class I, II, and III operators shall obtain a minimum of 20 contact hours during each license
9 renewal cycle.
 - 10
 - 11 2. Class IV operators shall obtain a minimum of 16 contact hours during each license renewal
12 cycle.
 - 13
 - 14 3. Class V operators shall obtain a minimum of eight contact hours during each license renewal
15 cycle.
 - 16
 - 17 4. Class VI operators shall obtain a minimum of four contact hours during each license renewal
18 cycle.

19

20 CPE provisions do not apply for the renewal of licenses that were held for less than two years
21 on the date of expiration.

22

23 B. The subject matter addressed during CPE contact hours shall be limited to the content areas
24 covered by the board's examination.

25

26 C. Any course approved by the board for substitution as training credits (TC) or formal education
27 semester hours, as provided for in section 18 VAC 160-20-160, shall also be acceptable on an
28 hour-for-hour basis for CPE contact hours. One semester hour of college credit shall equal 15
29 CPE contact hours and one quarter hour of college credit shall equal 10 CPE credit hours.

30

31 D. The following evidence shall be maintained to document completion of the hours of CPE
32 specified in subsection A of this section:

- 33
- 34 1. Evidence of completion of a structured training activity which shall consist of the name,
35 address and telephone number of the sponsor;
 - 36
 - 37 2. The date(s) the applicant participated in the training;
 - 38
 - 39 3. Descriptive material of the subject matter presented; and
- 40

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1 ~~reasons specified in subsection A of this section.~~

2 [Moved to 18 VAC 160-20-140]

3

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PART IV.

CLASSIFICATION REQUIREMENTS.

18 VAC 160-20-120. Waterworks

A. A Class VI waterworks licensee may operate any waterworks as follows:

1. A waterworks providing no treatment and serving fewer than 400 persons; or
2. A waterworks classified by the Virginia Department of Health as a Class VI waterworks.

B. A Class V waterworks licensee may operate any waterworks as follows:

1. A waterworks serving 400 or more persons which (i) provides no treatment; or (ii) employs hypochlorination for disinfection; or
2. A waterworks classified by the Virginia Department of Health as either a Class V or Class VI waterworks.

C. A Class IV waterworks licensee may operate any waterworks as follows:

1. A waterworks serving fewer than 5,000 persons or having a design hydraulic capacity of less than 0.5 MGD, employing one or more of the following (i) disinfection other than with hypochlorination, (ii) corrosion control, (iii) iron and manganese removal, (iv) ion exchange, (v) membrane technology without pretreatment, (vi) slow sand filtration, (vii) aeration, (viii) rechlorination other than with hypochlorination, or ~~(iv)~~ [ix] activated carbon contactors; or
2. A waterworks classified by the Virginia Department of Health as either a Class IV, V, or VI waterworks.

D. A Class III waterworks licensee may operate any waterworks as follows:

1. A waterworks serving fewer than 5,000 persons or having a design capacity less than 0.5 MGD, employing chemical coagulation or lime softening in combination with one or more of the following (i) sedimentation, (ii) rapid sand filtration with a filtration rate of 2 gpm/square foot or less, (iii) fluoridation, (iv) disinfection, (v) aeration, (vi) corrosion control, or (vii) membrane technologies; or

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- 1 2. A waterworks serving 5,000 or more persons or having a design hydraulic capacity of 0.5
2 MGD, employing one or more of the following; (i) disinfection other than with
3 hypochlorination, (ii) corrosion control, (iii) iron and manganese removal, (iv) ion exchange ,
4 (v) membrane technology without pretreatment, (vi) slow sand filtration, (vii) aeration, (viii)
5 rechlorination other than with hypochlorination, or (ix) activated carbon contactors; or
6
- 7 3. A waterworks employing (i) membrane technology requiring pretreatment consisting of pH
8 adjustment; or (ii) diatomaceous earth filtration, coupled with aeration, corrosion control,
9 disinfection, or fluoridation; or
10
- 11 4. A waterworks employing fluoridation which is not under a higher classification; or
12
- 13 5. A waterworks classified by the Virginia Department of Health as either a Class III, IV, V or
14 VI waterworks.

15
16 E. A Class II waterworks licensee may operate any waterworks as follows:
17

- 18 1. A waterworks serving 5,000 or more persons but fewer than 50,000 persons or having a
19 design hydraulic capacity of 0.5 MGD or more but less than 5.0 MGD [~~, whichever falls~~
20 ~~within the range,~~] employing chemical coagulation or lime softening in combination with one
21 or more of the following; (i) sedimentation, (ii) rapid sand filtration, (iii) fluoridation, (iv)
22 disinfection, (v) aeration, (vi) corrosion control, or (vii) membrane technologies; or
23
- 24 2. A waterworks serving fewer than 50,000 persons or having a design hydraulic capacity of
25 less than 5.0 MGD which employs chemical coagulation or lime softening coupled with
26 multimedia granular filtration or granular filtration at rates above 2.0 gpm/square foot (high
27 rate filtration) in combination with one or more of the following: (i) sedimentation, (ii)
28 fluoridation, (iii) disinfection, (iv) aeration, or (v) corrosion control; or
29
- 30 3. A waterworks employing biological activated carbon contactors or membrane technology
31 requiring pretreatment other than pH adjustment; or
32
- 33 4. A. Waterworks classified by the Virginia Department of Health as either a Class II, III, IV,
34 V or VI waterworks.

35
36 F. A Class I waterworks licensee may operate any waterworks [~~listed in subsections A through E~~
37 ~~of this section] .~~
38

39 G. The term membrane technologies includes (i) electrical dialysis reversal, (ii) reverse osmosis, (iii)
40 ultra filtration, (iv) micro filtration, and (v) nano filtration.

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1
2 **18 VAC 160-20-130. Wastewater works.**
3

4 A. A Class IV wastewater works licensee may operate any wastewater works as follows:

- 5
6 1. A wastewater works employing natural treatment methods (i.e., those not utilizing aerated
7 or mixed flows and not using electrical or outside energy sources to accomplish treatment)
8 with a design hydraulic capacity greater than 0.4 MGD but equal to or less than 1.0 MGD;
9 or
10
11 2. A wastewater works classified by the Virginia Department of Health or the Virginia
12 Department of Environmental Quality as a Class IV wastewater works.
13

14 B. A Class III wastewater works licensee may operate any wastewater works as follows:

- 15
16 1. A wastewater works using biological treatment methods consisting of but not limited to (i)
17 suspended growth reactors, (ii) aerated lagoons, (iii) constructed wetlands, (iv) biological
18 filters or other attached growth contactors, (v) processes utilizing biological nutrient control,
19 or (vi) processes utilizing land application having a design hydraulic capacity greater than
20 0.04 MGD, but equal to or less than 0.5 MGD; or
21
22 2. A wastewater works using advanced waste treatment methods consisting of but not limited
23 to (i) ammonia stripping, (ii) breakpoint chlorination, (iii) carbon adsorption, (iv) chemical
24 coagulation, (v) flocculation, (vi) precipitation, (vii) filtration, or (viii) demineralization (ion
25 exchange, reverse osmosis or electrodialysis) having a design hydraulic capacity greater than
26 0.04 MGD, but equal to or less than 0.5 MGD; or
27
28 3. A wastewater works using combinations of biological and advanced waste treatment
29 methods having a design hydraulic capacity greater than 0.04 MGD, but equal to or less
30 than 0.1 MGD; or
31
32 4. A wastewater works using natural treatment methods (i.e., those not using aerated or mixed
33 flows and not using electrical or outside energy sources to accomplish treatment) with a
34 design hydraulic capacity greater than 1.0 MGD; or
35
36 5. A wastewater works classified by the Virginia Department of Health or the Virginia
37 Department of Environmental Quality as either a Class III or IV wastewater works.
38

39 C. A Class II wastewater works licensee may operate any wastewater works as follows:
40

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- 1 1. A wastewater works using biological treatment methods consisting of but not limited to (i)
2 suspended growth reactors, (ii) aerated lagoons, (iii) constructed wetlands, (iv) biological
3 filters or other attached growth contactors, (v) processes utilizing biological nutrient control,
4 or (vi) processes utilizing land application having a design hydraulic capacity greater than 0.5
5 MGD, but equal to or less than 5.0 MGD; or
6
 - 7 2. A wastewater works using advanced waste treatment methods consisting of but not limited
8 to (i) ammonia stripping, (ii) breakpoint chlorination, (iii) carbon adsorption, (iv) chemical
9 coagulation, (v) flocculation, (vi) precipitation, (vii) filtration, or (viii) demineralization (ion
10 exchange, reverse osmosis or electro dialysis) having a design hydraulic capacity greater than
11 0.5 MGD, but equal to or less than 5.0 MGD; or
12
 - 13 3. A wastewater works using combinations of biological and advanced waste treatment
14 methods, having a design hydraulic capacity greater than 0.1 MGD, but equal to or less than
15 2.5 MGD; or
16
 - 17 4. A wastewater works classified by the Department of Health or the Department of
18 Environmental Quality as either a class II, III or IV wastewater works.
19
- 20 D. A Class I wastewater works licensee may operate any wastewater works [listed in
21 subsections A through C of this section].
22
23

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PART V.

STANDARDS OF PRACTICE

18 VAC 160-20-140. Discipline.

A. The board may fine any licensee and/or revoke or suspend any license, in accordance with the provisions of the Administrative Process Act, when a licensee has been found to have violated or cooperated with others in violating any of the provisions of Chapter 23 of Title 54.1, of the Code of Virginia, or any regulations of the board including the following grounds of discipline has the power to discipline and fine any licensee and to suspend or revoke or refuse to renew or reinstate any license as well as the power to deny any application for a license under the provisions of Chapter 23 of Title 54.1 of the Code of Virginia and this chapter for any of the following]:

1. [The license was obtained Obtaining] or [renewed renewing a license] through [fraud fraudulent means] or misrepresentation [; or .]
2. [Any conviction Having been convicted or found guilty] by a court in any jurisdiction of any felony or of any misdemeanor involving lying, cheating or stealing, or [of any material misrepresentation for activities carried out] while engaged in waterworks or wastewater works activities[, there being no appeal pending therefrom or the time for appeal having elapsed]. Any plea of nolo contendere shall be considered a conviction for purposes of this subsection. A certified copy of a final order, decree or case decision by a court or regulatory agency with the lawful authority to issue such order, decree or case decision shall be prima facia evidence of such conviction or discipline [; or . The record of conviction certified or authenticated in such form as to be admissible in evidence under the laws of the jurisdiction where convicted shall be admissible as prima facia evidence of such guilt.]
3. [The licensee did not demonstrate Not demonstrating] reasonable care, judgment, or application of the required knowledge, skill and ability in the performance of the operating duties [; or .]
4. [The licensee violated or induced Violating or inducing] another person to violate any provisions of Chapters 1, 2, 3 or 23 of Title 54.1 of the Code of Virginia, or [of] any provision of this chapter.

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- 1 5. Having been found guilty by the board, an administrative body or by a court of any
2 [material misrepresentation activity] in the course of performing his operating duties
3 [that resulted in the harm or the threat of harm to human health or the environment].
4
5 6. Failing to inform the board in writing within 30 days of pleading guilty or nolo
6 contendere or being convicted or found guilty [, regardless of adjudication,] of any
7 felony which resulted in the [significant] harm or the [imminent and substantial] threat
8 of harm to human health or the environment. [Failing to inform the board in writing
9 within 30 days of pleading guilty or nolo contendere or being convicted of or found
10 guilty, regardless of adjudication, of any felony or of any misdemeanor for activities
11 carried out while engaged in waterworks or wastewater works activities or involving
12 lying, cheating or stealing.]
13
14 7. [Gross negligence Negligence], or a continued pattern of incompetence, in the
15 practice as a waterworks or wastewater works operator.

17 [B. The board may refuse to grant a license to or renew the license of any person for the same
18 reasons as it may discipline a licensee.]
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1 **APPENDIX A. PART VI.**

2
3 **APPROVAL OF SPECIALIZED TRAINING.**

4
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6 **18 VAC 160-20-160. Approval of training.**

7
8 ~~—Specialized waterworks~~ Waterworks and wastewater works operator training for all licenses, may
9 be substituted for some of the experience required for Class III, Class II and Class I licenses, subject to
10 the limitations in this ~~appendix~~ section. Training courses that may be substituted for required experience
11 must be approved by the board ~~except prior to the training activity in accordance with the following~~
12 procedure: those provided by federal or state agencies[,] institutions, schools and universities approved
13 by the State Council of Higher Education for Virginia, for which conti[n]uing education units are
14 awarded. Training courses requiring board approval shall be approved by the board prior to
15 commencing in accordance with the following:

16
17 A. Training ~~activities~~ courses for which experience credit may be granted must be conducted in
18 general conformance with the guidelines of the ~~Council on the Continuing Education Unit~~
19 International Association for Continuing Education and Training[(Association)]. The board
20 reserves the right to waive any of the requirements of the ~~council's~~ Association's guidelines on a
21 case-by-case basis. Only classroom, laboratory and field trip contact time will be used to
22 compute training credits. No credit will be given for breaks, meals, or receptions.

- 23
24 1. Organization. The board will only approve training offered by a sponsor who is an
25 identifiable organization with a mission statement outlining its functions, structure, process
26 and philosophy, and that has a staff of one or more persons with the authority to administer
27 and coordinate a training credit (TC) program.
- 28
29 2. TC records. The board will only approve training offered by a sponsor who maintains TC
30 records for all participants for a minimum of ~~20~~ seven years, and who has a written policy
31 on retention and release of TC records.
- 32
33 3. Instructors. The board will only approve training conducted by personnel who have
34 demonstrated competence in the subject being taught, an understanding of the learning
35 objective, a knowledge of the learning process to be used, and a proven ability to
36 communicate.
- 37
38 4. Objectives. The board will only approve courses that have a series of stated objectives that
39 are consistent with the job requirements of waterworks and wastewater works operators.
40 The training course content must be consistent with those objectives.

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2 5. Course completion requirements. For successful completion of a training ~~program~~ course,
3 participants must attend 90% or more of the class contact time and must demonstrate their
4 learning through written examinations, completion of a project, self-assessment, oral
5 examination, or other assessment technique.
6

7 B. The board shall consider the following information, to be submitted by the course sponsor or
8 instructor on forms provided by the board, at least 45 days prior to the scheduled training
9 activity course:
10

11 1. Course information.

12 a. Course title

13 b. Planned audience

14 c. Name of sponsor

15 d. Name, address, phone number of contact person

16 e. Scheduled presentation dates

17 f. Detailed course schedule, hour-by-hour

18 g. List of planned breaks

19 h. Scheduled presentation location

20 i. Relevancy of course to waterworks or wastewater works operator licensing
21
22

23 2. Instructor qualifications.

24 a. Name of instructor

25 b. Title, employer

26 c. Summary of qualifications to teach this course
27
28

29 3. Training materials.
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- 1 a. Course objectives. A listing of the course objectives stated in ~~the~~ terms of the skills,
2 knowledge, or attitude the participant will be able to demonstrate as a result of the
3 training.
- 4
- 5 b. Course outline. A detailed outline showing the planned activities that will occur during
6 the training ~~program~~ course, including major topics, planned presentation sequence,
7 laboratory and field activities, audio-visual presentation, and other major activities.
- 8
- 9 c. Course reference materials. A list of the name, publisher and publication date for
10 commercially available publications. For reference materials developed by the course
11 sponsor or available exclusively through the course, a copy of the reference.
- 12
- 13 d. Audio-visual support materials. A listing of any commercially available audio-visual
14 support material that will be used in the program. A brief description of any sponsor or
15 instructor generated audio-visual material that will be used.
- 16
- 17 e. Handouts. Identification of all commercially available handout materials that will be
18 used; as well as copies of all other planned handouts.
- 19
- 20 4. Determination of successful completion. A description of the means that will be used to
21 ~~determine the successful completion of the training program by individual attendees, such as~~
22 ~~examinations, projects, personal evaluations by the instructor, or other recognized~~
23 ~~evaluation techniques—~~assess the learning of each participant to determine successful
24 completion of the training program, such as examinations, projects, personal evaluations by
25 the instructor, or other recognized evaluation techniques.
- 26
- 27 ~~B.—Substitution of training for experience will be approved by the board only for applicants~~
28 ~~whose names appear on a roster of those participants who successfully completed the~~
29 ~~course, including their names and social security numbers. Submitted to the board by the~~
30 ~~sponsor, and who submit a copy of an appropriate certificate identifying the subject~~
31 ~~matter of the course and the TC value, provided to the participant by the sponsor.~~
- 32
- 33 ~~D.C.~~ D.C. Recurring training programs. If there are plans to present the same course of instruction
34 routinely at multiple locations with only minor modifications and changes, the board may
35 approve the overall program rather than individual presentations if so requested by the sponsor.
- 36
- 37 1. The board shall consider all of the information listed above except those items related to
38 specific offerings of the course.
- 39
- 40 2. Board approval may be granted for a specific period of time or for an indefinite period.

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3. Board approval will apply only to those specific offerings ~~appearing on listings provided to the board prior to conducting the training. The listing shall contain for each offering the dates, locations, and instructors.~~ certified by the sponsoring organization as having been conducted by instructors meeting the established criteria and in accordance with the board approved course outlines and objectives.
4. To maintain approval of the program, changes made to the program since its approval must be submitted to the board.

I certify that this regulation is full, true, and correctly dated.

(Signature of Certifying Official)
David E. Dick, Assistant Director
Department of Professional and Occupational Regulation

Date: December 21, 2000